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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,191	10/13/2005	Shingo Hishiya	279088US26PCT	2212
22850	7590	05/16/2008		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER PATEL, REEMA	
			ART UNIT	PAPER NUMBER
			2812	
			NOTIFICATION DATE	DELIVERY MODE
			05/16/2008	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/553,191	<b>Applicant(s)</b> HISHIYA, SHINGO	
	<b>Examiner</b> REEMA PATEL	<b>Art Unit</b> 2812	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,7,12,13,17 and 21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,2 and 17 is/are allowed.
- 6) ☒ Claim(s) 7,12,13 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/22/08 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 7 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srinivasan et al. (U.S. 6,306,776 B1; hereinafter 'Srinivasan') in view of Cheung et al. (U.S. 2002/0045361 A1; hereinafter 'Cheung').

4. Claims 7 and 12-13 are apparatus claims and as such will be examined with regards to the structure implied by the claim limitations rather than function or method of operation (MPEP 2114).

5. Regarding claims 7 and 12-13, Srinivasan discloses an apparatus comprising:

- A reaction chamber (12, Fig. 1)
- A temperature adjusting section (16, Fig. 1)

- A gas supply section (38, Fig. 1);
- A gas activation section disposed outside the reaction chamber (40, Fig. 1);
- An exhaust section (26, Fig. 1);

6. Yet, Srinivasan does not disclose a control section configured to control the temperature adjusting section, gas supply section, activation section, and exhaust section. However, Cheung discloses a system controller which controls all activities of a processing apparatus ([0057]). Such a system controller has the advantage of being able to control all activities in single location which can allow for a human operator to vary multiple processing conditions with greater ease. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Srinivasan with a single control section configured to control all of the chamber's activities, as taught by Cheung, so as to allow for multiple processing condition variation with greater ease

7. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Srinivasan et al. (U.S. 6,306,776 B1; hereinafter 'Srinivasan') and Cheung et al. (U.S. 2002/0045361 A1; hereinafter 'Cheung') as applied to claim 7 above and further in view of Kobayashi et al. (U.S. 5,688,116) and examiner's Official Notice.

8. Regarding claim 21, Srinivasan and Cheung disclose the reaction chamber is configured to accommodate a plurality of target substrates (Srinivasan: col 3, lines 12-15) but does not disclose that the plurality of target substrates are at intervals in a vertical direction. However, the examiner takes the position that vertical wafer boats are well known (see for example, Kobayashi et al., Fig. 1) and that the substitution of a

vertical wafer boat for that of a horizontal one, as taught by Srinivasan (14, Fig. 1), would have been obvious since both types of wafer boats are able to perform the predictable task of holding a plurality of wafers within a reaction chamber. Moreover, a vertical wafer boat would have the advantage of accommodating a greater number of wafers for a given reaction chamber length. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Srinivasan and Cheung with a vertical wafer boat so as to be able to accommodate a greater number of wafers for a given reaction chamber length.

#### ***Allowable Subject Matter***

9. Claims 1-2 and 17 are allowed.

10. Claim 1 contains allowable subject matter because of the limitation of baking a polysiloxane base solution with an activated dinitrogen oxide or ammonia gas, wherein activation of the gas occurs thermally and with contact by a tungsten catalyst in an activation section located outside of a reaction chamber. Claims 2 and 17 depend on claim 1.

#### ***Response to Arguments***

11. Applicant's arguments with respect to claims 7, 12-13, and 21 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to REEMA PATEL whose telephone number is (571)270-1436. The examiner can normally be reached on M-F, 8:00-4:30 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Garber can be reached on (571)272-2194. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Reema Patel/  
Examiner, Art Unit 2812  
5/9/08

/Scott B. Geyer/  
Primary Examiner, Art Unit 2812